

Amendment And Response
Serial No. 10/000,284

REMARKS

Claims 1-42 and 44-52 are pending in the present application. By this Amendment, the specification has been amended; original claims 1-5, 10-12, 16, 24, 36, 44-45 and 47 have been amended; original claim 43 has been canceled; and new claims 49-52 have been added. Applicants respectfully request reconsideration of the present claims in view of the foregoing amendment and the following remarks.

I. Formal Matters:

November 21, 2003 Telephone Interview

Applicants thank Examiner Shosho for discussing the present invention during a November 21, 2003 telephone interview. As discussed during the interview, Applicants have amended the claims as suggested by Examiner Shosho to clearly recite that the claimed ink composition is an ink jet ink.

Claim Rejection Under 35 U.S.C. §112, 2nd Paragraph

Previously presented claims 1-35 were rejected under 35 U.S.C. §112, 2nd paragraph for allegedly being indefinite. In the August 21, 2003 Office Action, Examiner Shosho stated that language found in previously presented claims 1 and 24 rendered the claims indefinite. In particular, Examiner Shosho objected to language used to describe "each X²" and "each R^A" used in the chemical formula. (Applicants note that the language identified by Examiner Shosho is actually found in claims 2 and 24.)

Claims 3 and 43 were also rejected due to the use of the term "substantially" in the claims.

Applicants have amended claims 2-3 and 24 as shown above to remove the language objected to by Examiner Shosho. Further, original claim 43 has been canceled. It should be noted that the amendments to claims 2-3 and 24 were made solely to address the language objected to by Examiner Shosho, and were not made to (i) avoid the art of record or (ii) further limit the claimed invention. Given the above claim amendments, withdrawal of this rejection is respectfully requested.

II. Prior Art Rejections:

Claim Rejections Under 35 U.S.C. §102(b)

Rejection of Claims 1-4, 6-12, 15 and 36-41 Under 35 U.S.C. §102(b) In View Of Krepksi'626

Previously presented claims 1-4, 6-12, 15 and 36-41 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,747,626 to Krepksi et al. (hereinafter, "Krepksi'626"). This rejection is respectfully traversed.

Applicants' claimed invention embodied by independent claim 1 is directed to an ink comprising, *inter alia*, an aqueous vehicle, and dispersed particles of a silyl-terminated sulfopoly(ester-urethane), wherein the ink is an ink jet ink.

Applicants' claimed invention embodied by independent claim 36 is directed to an ink comprising, *inter alia*, an aqueous vehicle, colorant, and at least 20 weight percent dispersed shear deformable polymer particles wherein the polymer is self-crosslinking, and wherein the ink is an ink jet ink.

The disclosure of Krepksi'626 is directed to pavement marking paints for applying to a pavement surface.

In order for the disclosure of Krepksi'626 to anticipate Applicants' claimed invention embodied in independent claims 1 and 36, the disclosure of Krepksi'626 must disclose each and every claim element of independent claims 1 and 36. Applicants note that the disclosure of Krepksi'626 fails to disclose at least the following claim elements recited in independent claims 1 and 36:

- (1) an ink (claims 1 and 36);
- (2) an ink that is an ink jet ink (claims 1 and 36);
- (3) an ink that is an ink jet ink and contains dispersed particles of a silyl-terminated sulfopoly(ester-urethane) (claim 1); and
- (4) an ink that is an ink jet ink and contains at least 20 weight percent dispersed shear deformable polymer particles wherein the polymer is self-crosslinking (claim 36).

Since the disclosure of Krepksi'626 fails to disclose the above-mentioned claim elements recited in independent claims 1 and 36, the disclosure of Krepksi'626 cannot anticipate

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independent claims 1 and 36. Since claims 2-4, 6-12, 15 and 37-41 depend from independent claims 1 and 36 and recite additional claim features, the disclosure of Krepski'626 cannot anticipate dependent claims 2-4, 6-12, 15 and 37-41. Accordingly, Applicants respectfully request withdrawal of this rejection.

Rejection of Claims 1-4, 6-12, 15 and 36-41 Under 35 U.S.C. §102(b) In View Of Krepski'160

Previously presented claims 1-4, 6-12, 15 and 36-41 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,929,160 to Krepski et al. (hereinafter, "Krepski'160"). This rejection is respectfully traversed.

A description of Applicants' claimed invention embodied by independent claims 1 and 36 may be relied upon above.

The disclosure of Krepski'160 is directed to methods for making silyl-terminated sulfopoly(ester-urethanes).

In order for the disclosure of Krepski'160 to anticipate Applicants' claimed invention embodied in independent claims 1 and 36, the disclosure of Krepski'160 must disclose each and every claim element of independent claims 1 and 36. Applicants note that the disclosure of Krepski'160 fails to disclose at least the following claim elements recited in independent claims 1 and 36:

- (1) an ink (claims 1 and 36);
- (2) an ink that is an ink jet ink (claims 1 and 36);
- (3) an ink that is an ink jet ink and contains dispersed particles of a silyl-terminated sulfopoly(ester-urethane) (claim 1); and
- (4) an ink that is an ink jet ink and contains at least 20 weight percent dispersed shear deformable polymer particles wherein the polymer is self-crosslinking (claim 36).

Since the disclosure of Krepski'160 fails to disclose the above-mentioned claim elements recited in independent claims 1 and 36, the disclosure of Krepski'160 cannot anticipate independent claims 1 and 36. Since claims 2-4, 6-12, 15 and 37-41 depend from independent claims 1 and 36 and recite additional claim features, the disclosure of Krepski'160 cannot

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anticipate dependent claims 2-4, 6-12, 15 and 37-41. Accordingly, Applicants respectfully request withdrawal of this rejection.

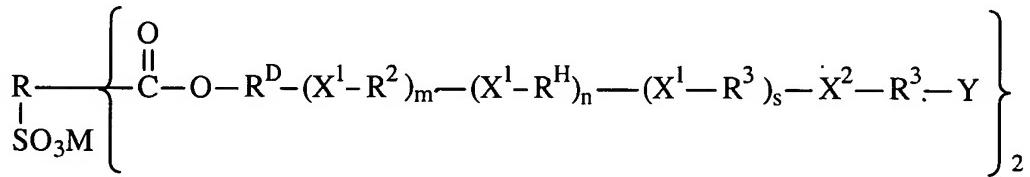
Claim Rejections Under 35 U.S.C. §103(a):

Rejection of Claims 1-2, 4, 6-9, 15-18, 23-27 and 34-48 Under 35 U.S.C. §103(a)
In View Of Kubota In Combination With Krepski'160

Previously presented claims 1-2, 4, 6-9, 15-18, 23-27 and 34-48 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,846,306 to Kubota et al. (hereinafter, "Kubota") in view of Krepski'160. This rejection is respectfully traversed.

A description of Applicants' claimed invention embodied by independent claims 1 and 36, and a description of the disclosure of Krepski'160 may be relied upon above.

Applicants' claimed invention embodied by independent claim 24 is directed to a method of imaging a substrate comprising, *inter alia*, ink jet printing an aqueous composition onto a substrate wherein the aqueous composition comprises an aqueous vehicle and a silyl-terminated sulfopoly(ester-urethane) having the formula:



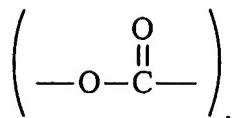
wherein

R represents a C₆ - C₁₂ aryl triyl or C₁ - C₂₀ aliphatic triyl group (trivalent aryl or aliphatic group) wherein M is H⁺, an alkali metal cation, an alkaline earth metal cation, or a primary, secondary, tertiary, or quaternary ammonium cation;

each m independently represents 0 or 1, each n independently represents 0 or 1, each s independently represents 0 or 1, with the proviso that, at least one of m or n must be equal to 1;

each R^D independently represents:

- 1) at least one of a divalent linear or branched organic group of 20 to 150 carbon atoms in units of 2 to 12 methylene groups and arylene groups of 6 to 10 carbon atoms separated by at least one of 1 to 50 catenary oxygen atoms and by 1 to 30 oxycarbonyl groups,



2) an organic group selected from the group consisting of a linear or branched alkylene group having 2 to 12 carbon atoms, a cyclopentamethylene group, a cyclohexamethylene group, a 5- or 6-membered azacyclic group, a phenylene group, a naphthalene group, a phenylenemethylenephenylen group, the organic group optionally being substituted by up to four lower alkyl groups having 1 to 4 carbon atoms and a total of up to 15 carbon atoms, which organic group can be chain extended by a transesterification reaction between a diol terminated ester precursor and a lower aliphatic diester of an aliphatic diacid having from 2 to 12 carbons or an aromatic diacid having from 8 to 12 carbons or reaction between a diol terminated ester precursor and an aliphatic lactone of 4 to 6 carbons, or

3) the structure $\{-R^1(X^1-R^2-X^1-R^1)_p\}$ where p is an integer from 1 to 5, produced by the reaction of a polyol with an isocyanate having the structure OCN-R²-NCO to produce a segment having a molecular weight of from 500 to 4,000;

each R¹ independently represents a linear or branched alkylene group having 2 to 12 carbon atoms, or an arylene group having 6 to 10 carbon atoms;

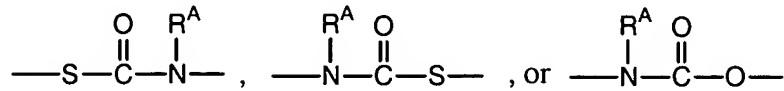
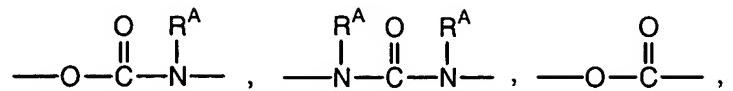
each X¹ independently represents



each R² independently represents an organic group selected from the group consisting of a linear or branched alkylene group having 2 to 12 carbon atoms, a cyclopentamethylene group, a cyclohexamethylene group, a 5- or 6-membered azacyclic group, a phenylene group, a naphthalene group, a phenylenemethylenephenylen group, the organic group optionally being substituted by up to four lower alkyl groups having 1 to 4 carbon atoms and a total of at most 15 carbon atoms;

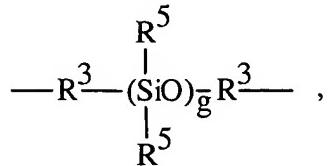
each X² independently represents

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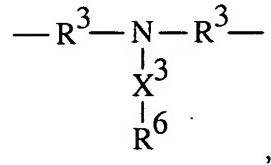


wherein each R^{A} independently represents hydrogen, lower alkyl having 1 to 4 carbon atoms, or $\text{R}^1\text{-Y}$;

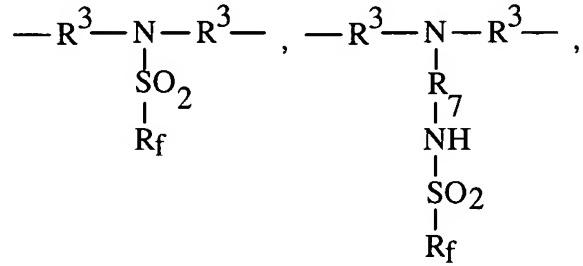
each R^{H} independently represents a divalent hydrophobic group selected from divalent oligomeric siloxanes having the structure



divalent organic groups having the structure



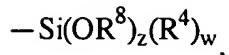
or divalent organic groups having one of the structures



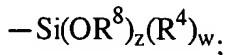
or quaternary salts thereof, wherein

each R^3 independently represents a divalent linear or branched alkylene group having 2 to 12 carbon atoms, or a divalent arylene or alkarylene group having 6 to 20 carbon atoms;

each Y independently represents H, an alkyl group having from 1 to 20 carbon atoms, an aryl group having from 6 to 10 carbon atoms, or



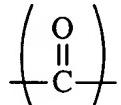
wherein each R^4 independently represents a monovalent lower alkyl group having from 1 to 4 carbon atoms, each R^8 is H or a monovalent lower alkyl group having from 1 to 4 carbon atoms, each z is independently 2 or 3, each w is independently 0 or 1, and wherein $z + w = 3$, with the proviso that at least one Y has the formula



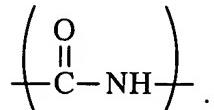
each R^5 independently represents a monovalent group selected from the group consisting of alkyl groups of 1 to 12 carbon atoms, aryl having 6 to 10 carbon atoms, or aralkyl groups having 6 to 10 carbon atoms, with at least 70 percent of R^4 being methyl;

each g independently represents an integer of from 10 to 300;

each X^3 independently represents a covalent bond, a carbonyl group,



or a divalent amido group



each R^6 independently represents a monovalent group selected from the group consisting of alkyl groups of about 4 to about 60 carbon atoms;

each R^7 independently represents a divalent group selected from the group consisting of alkylene groups of 2 to about 12 carbon atoms; and

each R_f independently represents a monovalent saturated fluoroaliphatic group having 6 to 12 carbon atoms, at least four of which are fully-fluorinated carbon atoms.

Applicants' claimed invention embodied by independent claim 42 is directed to a method of imaging a substrate comprising, *inter alia*, ink jet printing an aqueous composition on a substrate wherein the aqueous composition comprising (i) an aqueous vehicle, and (ii) at least 20 weight percent dispersed shear deformable particles, wherein the polymer is self-crosslinking.

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The teaching of Kubota is directed to ink jet printable inks having improved lightfastness and waterfastness for use on paper substrates. The disclosed ink jet printable inks comprise at least one pigment shown in formulae (I) to (III), and may further comprise one or more of the following components: water, a low-boiling organic solvent, a high-boiling organic solvent, a surfactant, and an acrylic or styrene/acrylic emulsion (see, column 5, line 16 to column 6, line 63).

The teaching of Kubota fails to teach or suggest the following features recited in independent claims 1, 24, 36 and 42:

- (1) an ink jet ink containing dispersed particles of a silyl-terminated sulfopoly(ester-urethane) as recited in claim 1;
- (2) a method of imaging a substrate comprising ink jet printing an ink composition onto the substrate, wherein the ink composition contains silyl-terminated sulfopoly(ester-urethane) having a structural formula as recited in claim 24;
- (3) an ink jet ink containing at least 20 weight percent dispersed shear deformable polymer particles wherein the polymer is self-crosslinking as recited in claim 36; and
- (4) a method of imaging a substrate comprising ink jet printing an ink composition onto the substrate, wherein the ink composition contains at least 20 weight percent dispersed shear deformable particles, wherein the polymer is self-crosslinking as recited in claim 42.

The Office Action relies on the teaching of Krepski'160 to allegedly cure the above-noted deficiencies in the teaching of Kubota.

As discussed above, the teaching of Krepski'160 is directed to methods for making silyl-terminated sulfopoly(ester-urethanes). The teaching of Krepski'160 fails to teach or suggest the use of silyl-terminated sulfopoly(ester-urethanes) in ink compositions, and especially ink jet printable ink compositions.

The Office Action acknowledges that the teaching of Kubota fails to teach or suggest Applicants' claimed invention as embodied in independent claims 1, 24, 36 and 42. In particular, Examiner Shosho states on page 8, lines 11-13 of the August 21, 2003 Office Action:

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The difference between Kubota et al. and the present claimed invention is the requirement in the claims of (a) silyl-terminated sulfopoly(ester-urethane) polymer and (b) ink set comprising black and white ink.

Although the teaching of Kubota fails to teach or suggest ink jet ink compositions containing shear deformable polymer particles and the teaching of Krepski'160 fails to disclose the use of silyl-terminated sulfopoly(ester-urethane) polymeric particles in ink compositions, Examiner Shosho concludes that the present invention would have been obvious over the combined teaching of Kubota and Krepski'160. In particular, Examiner Shosho states on page 9, lines 9-13 of the August 21, 2003 Office Action:

In light of the motivation for using silyl-terminated sulfopoly(ester-urethane) polymer disclosed by Krepski et al. '160 as described above, it therefore would have been obvious to one of ordinary skill in the art to use silyl-terminated sulfopoly(ester-urethane) polymer in the ink of Kubota et al. in order to produce ink with good toughness, weatherability, abrasion resistance, and enhanced adhesion, and thereby arrive at the claimed invention.

Applicants disagree.

Examiner Shosho suggests that one of ordinary skill in the art, given the teaching of Kubota, would have (1) realized that the teaching of Kubota had one or more shortcomings related to the disclosed ink jet printable inks, (2) sought out the teaching of Krepski'160, which is not directed to inks or ink jet printable inks, and (3) incorporated silyl-terminated sulfopoly(ester-urethane) polymeric particles from the teaching of Krepski'160 into the ink jet printable inks of Kubota in order to improve the toughness, weatherability, abrasion resistance, and/or enhanced adhesion of the ink jet printable inks of Kubota. Applicants disagree.

Applicants respectfully submit that one of ordinary skill in the art, given the teaching of Kubota directed to ink jet printable inks, would not have sought out the teaching of Krepski'160, which is not directed to inks or ink jet printable inks. There is no disclosure or suggestion in the teaching of Kubota that would have lead one skilled in the art to the teaching of Krepski'160 and the specific silyl-terminated sulfopoly(ester-urethane) polymeric particles disclosed therein.

Examiner Shosho suggests that one of ordinary skill in the art given the teaching

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of Kubota would have been motivated to seek out the teaching of Krepski'160, which is not directed to inks or ink jet printable inks, in order to improve the toughness, weatherability, abrasion resistance, and/or enhanced adhesion of the ink jet printable inks of Kubota. However, it should be noted that the teaching of Kubota discloses the incorporation of specific thermoplastic resin emulsions to provide improved water resistance and rubbing resistance (see, column 7, lines 9-47). Applicants respectfully submit that one of ordinary skill in the art seeking to improve the toughness, weatherability, abrasion resistance, and/or enhanced adhesion of the ink jet printable inks of Kubota would rely on the disclosure of Kubota, which addresses these concerns with specific thermoplastic resin emulsion systems, and not seek out the teaching of Krepski'160 as suggested.

It is not clear to Applicants why one of ordinary skill in the art, given the teaching of Kubota, would have sought out the teaching of Krepski'160 and then modified the ink jet printable ink compositions disclosed in the teaching of Kubota as proposed in the Office Action. Applicants respectfully submit that the only motivation for such a modification of the teaching of Kubota has been deemed from a review of Applicants' invention, not from what is being taught or suggested in the art.

For at least the reasons given above, Applicants respectfully submit that a *prima facie* case of obviousness has not been made, and that the combination of the teaching of Kubota with the teaching of Krepski'160 fails to make obvious Applicants' claimed invention as embodied in independent claims 1, 24, 36 and 42. Since claims 2, 4, 6-9, 15-18, 23, 25-27, 34-35, 37-41, and 44-48 depend from independent claims 1, 24, 36 and 42, and recite additional claim features, Applicants respectfully submit that the combination of the teaching of Kubota with the teaching of Krepski'160 also fails to make obvious claims 2, 4, 6-9, 15-18, 23, 25-27, 34-35, 37-41, and 44-48. Accordingly, Applicants respectfully request withdrawal of this rejection.

Rejection of Claims 1-5, 9-16, 23-25, 27, 31, 34-39, and 42-48 Under 35 U.S.C.
§103(a) In View Of Zhu In Combination With Krepski'160

Previously presented claims 1-5, 9-16, 23-25, 27, 31, 34-39, and 42-48 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,889,083 to Zhu

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(hereinafter, "Zhu") in view of Krepski'160. This rejection is respectfully traversed.

A description of Applicants' claimed invention embodied by independent claims 1, 24, 36 and 42, and a description of the disclosure of Krepski'160 may be relied upon above.

Like the teaching of Kubota, the teaching of Zhu is directed to ink jet printable ink compositions, which provide scratch and rub resistance to a printed image. The disclosed ink jet printable ink compositions contain specific binder resins, similar to those disclosed in the teaching of Kubota, and waxes in order to provide toughness, abrasion resistance, adhesion, and color fixing properties to the printed image (see, column 4, lines 47-54; column 6, lines 31-42; and column 8, lines 21-25).

Like the teaching of Kubota, the teaching of Zhu fails to teach or suggest the following features recited in independent claims 1, 24, 36 and 42:

- (1) an ink jet ink containing dispersed particles of a silyl-terminated sulfopoly(ester-urethane) as recited in claim 1;
- (2) a method of imaging a substrate comprising ink jet printing an ink composition onto the substrate, wherein the ink composition contains silyl-terminated sulfopoly(ester-urethane) having a structural formula as recited in claim 24;
- (3) an ink jet ink containing at least 20 weight percent dispersed shear deformable polymer particles wherein the polymer is self-crosslinking as recited in claim 36; and
- (4) a method of imaging a substrate comprising ink jet printing an ink composition onto the substrate, wherein the ink composition contains at least 20 weight percent dispersed shear deformable particles, wherein the polymer is self-crosslinking as recited in claim 42.

The Office Action acknowledges that the teaching of Zhu fails to teach or suggest ink jet printable ink compositions containing silyl-terminated sulfopoly(ester-urethane) particles (see, August 21, 2003 Office Action, page 10, lines 9-10), and relies on the teaching of Krepski'160 to allegedly cure the above-noted deficiencies in the teaching of Zhu using an identical analysis as described above with regard to the rejection of claims 1-2, 4, 6-9, 15-18, 23-27 and 34-48 in view of the combined teachings of Kubota and Krepski'160.

For similar reasons as discussed above, Applicants respectfully submit:

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(1) that one of ordinary skill in the art, given the teaching of Zhu directed to ink jet inks, would not have sought out the teaching of Krepski'160, which is not directed to inks or ink jet inks;

(2) that there is no disclosure or suggestion in the teaching of Zhu that would have lead one skilled in the art to the teaching of Krepski'160 and the specific silyl-terminated sulfopoly(ester-urethane) polymeric particles disclosed therein;

(3) that the teaching of Zhu discloses the incorporation of specific binder resins and waxes to provide improved toughness, abrasion resistance, adhesion, and color fixing properties to a printed image, so one of ordinary skill in the art seeking to improve the toughness, weatherability, abrasion resistance, and/or enhanced adhesion of the ink jet inks of Zhu would rely on the disclosure of Zhu, which addresses these concerns with specific binder resins and waxes, and not seek out the teaching of Krepski'160 as suggested; and

(4) that the only motivation for such a modification of the teaching of Zhu has been deemed from a review of Applicants' invention, not from what is being taught or suggested in the art.

For at least the reasons given above, Applicants respectfully submit that a *prima facie* case of obviousness has not been made, and that the combination of the teaching of Zhu with the teaching of Krepski'160 fails to make obvious Applicants' claimed invention as embodied in independent claims 1, 24, 36 and 42. Since claims 2-5, 9-16, 23, 25, 27, 31, 34-35, 37-39, and 44-48 depend from independent claims 1, 24, 36 and 42, and recite additional claim features, Applicants respectfully submit that the combination of the teaching of Zhu with the teaching of Krepski'160 also fails to make obvious claims 2-5, 9-16, 23, 25, 27, 31, 34-35, 37-39, and 44-48. Accordingly, Applicants respectfully request withdrawal of this rejection.

Rejection of Claims 1-2, 4-9, 15-16, 23-25, 27-30, 32-37, 40 and 42-48 Under 35 U.S.C. §103(a) In View Of Erdtmann In Combination With Krepski'160

Previously presented claims 1-2, 4-9, 15-16, 23-25, 27-30, 32-37, 40 and 42-48 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,533,408 to Erdtmann et al. (hereinafter, "Erdtmann") in view of Krepski'160. This rejection is respectfully traversed.

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A description of Applicants' claimed invention embodied by independent claims 1, 24, 36 and 42, and a description of the disclosure of Krepski'160 may be relied upon above.

The teaching of Erdtmann is directed to ink jet printable ink compositions and ink-receiving substrates, such as paper and resin-coated paper. The disclosed ink jet printable ink compositions contain specific water-dispersible polymers in order to provide wet and dry abrasion resistance, and ozonefastness to the printed image (see, column 6, line 8 to column 9, line 6; Example 1; column 14, lines 34-67; and Tables 3-5).

Like the teachings of Kubota and Zhu, the teaching of Erdtmann fails to teach or suggest the following features recited in independent claims 1, 24, 36 and 42:

- (1) an ink jet ink containing dispersed particles of a silyl-terminated sulfopoly(ester-urethane) as recited in claim 1;
- (2) a method of imaging a substrate comprising ink jet printing an ink composition onto the substrate, wherein the ink composition contains silyl-terminated sulfopoly(ester-urethane) having a structural formula as recited in claim 24;
- (3) an ink jet ink containing at least 20 weight percent dispersed shear deformable polymer particles wherein the polymer is self-crosslinking as recited in claim 36; and
- (4) a method of imaging a substrate comprising ink jet printing an ink composition onto the substrate, wherein the ink composition contains at least 20 weight percent dispersed shear deformable particles, wherein the polymer is self-crosslinking as recited in claim 42.

The Office Action acknowledges that the teaching of Erdtmann fails to teach or suggest ink jet ink compositions containing silyl-terminated sulfopoly(ester-urethane) particles (see, August 21, 2003 Office Action, page 11, lines 18-19), and relies on the teaching of Krepski'160 to allegedly cure the above-noted deficiencies in the teaching of Erdtmann using an identical analysis as described above with regard to (i) the rejection of claims 1-2, 4, 6-9, 15-18, 23-27 and 34-48 in view of the combined teachings of Kubota and Krepski'160 and (ii) the rejection of claims 1-5, 9-16, 23-25, 27, 31, 34-39, and 42-48 in view of the combined teachings of Zhu and Krepski'160.

For similar reasons as discussed above, Applicants respectfully submit:

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- (1) that one of ordinary skill in the art, given the teaching of Erdtmann directed to ink jet inks, would not have sought out the teaching of Krepski'160, which is not directed to inks or ink jet inks;
- (2) that there is no disclosure or suggestion in the teaching of Erdtmann that would have lead one skilled in the art to the teaching of Krepski'160 and the specific silyl-terminated sulfopoly(ester-urethane) polymeric particles disclosed therein;
- (3) that the teaching of Erdtmann discloses the incorporation of specific water-dispersible polymers to provide improved abrasion resistance, as well as, other properties to a printed image, so one of ordinary skill in the art seeking to improve the abrasion resistance, of the ink jet inks of Erdtmann would rely on the disclosure of Erdtmann, which addresses these concerns with specific water-dispersible polymers, and not seek out the teaching of Krepski'160 as suggested; and
- (4) that the only motivation for such a modification of the teaching of Erdtmann has been deemed from a review of Applicants' invention, not from what is being taught or suggested in the art.

For at least the reasons given above, Applicants respectfully submit that a *prima facie* case of obviousness has not been made, and that the combination of the teaching of Erdtmann with the teaching of Krepski'160 fails to make obvious Applicants' claimed invention as embodied in independent claims 1, 24, 36 and 42. Since claims 2, 4-9, 15-16, 23, 25, 27-30, 32-35, 37, 40 and 44-48 depend from independent claims 1, 24, 36 and 42, and recite additional claim features, Applicants respectfully submit that the combination of the teaching of Erdtmann with the teaching of Krepski'160 also fails to make obvious claims 2, 4-9, 15-16, 23, 25, 27-30, 32-35, 37, 40 and 44-48. Accordingly, Applicants respectfully request withdrawal of this rejection.

III. New Claims 49-52:

New claims 49-52 depend from independent claims 36 and 42 described above, and recite additional claim features. Applicants respectfully submit that new claims 49-52 are

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patentable over the art of record for at least the reasons given above with regard to independent claims 36 and 42.

IV. Conclusion:

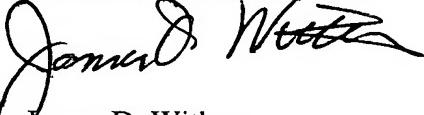
For at least the reasons given above, Applicants submit that claims 1-42 and 44-52 define patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

Kindly charge Deposit Account No. 13-2725 in the amount of \$18.00 for the addition of one (1) claim. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 13-2725.

Should the Examiner believe that anything further is necessary to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

Respectfully submitted,

MERCHANT & GOULD, LLC


By: James D. Withers
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